

DIVISION

ATTORNEY DOCKET NO.: 02157.0029U1  
PATENT

227 JUL 25 PM 4: 29

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Moore, et al.

Application No. 10/579,123

Filing Date: October 16, 2006

For: DOMESTIC HEAT AND POWER  
SYSTEM

)  
)  
) Confirmation No. 6665  
)  
) Group Art Unit: 3748  
)  
) Examiner: Unassigned  
)  
)  
)

**REQUEST FOR REFUND**

MAIL STOP 16  
Commissioner for Patent  
P. O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859

January 22, 2007

Sir:

On October 16, 2006, Applicant filed with the United States Designated/Elected Office (DO/EO/US) a U.S. National Phase patent application. Although the original PCT application had 41 claims, Applicants filed a Preliminary Amendment (Exhibit A) with the initial filing canceling claims 20, 30 and 38 and adding new claims 42-61, which left 58 total claims and 7 independent claims. Applicant paid the basic national fee (\$300.00), examination fee (\$200.00), search fee (\$400.00), surcharge for oath and declaration fee (\$130.00), excess dependent claim fee (\$1900.00) and (\$800.00) excess independent claim fee, totaling \$3730.00 (see Exhibit B).

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EXPRESS MAIL LABEL NO. EL 997678891 US  
PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of	)	
	)	
MOORE, et al.	)	Art Unit: unassigned
	)	
International Application No. PCT/GB2004/004835	)	Examiner: unassigned
	)	
International Filing Date: 15 November, 2004	)	Confirmation No. unassigned
	)	
	)	
For: DOMESTIC HEAT AND	)	
POWER SYSTEM	)	

**PRELIMINARY AMENDMENT**

Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.  
Customer No. 23859

Sir:

Prior to the issuance of an Office Action pertaining to the above-referenced patent application, filed simultaneously herewith, please enter the following preliminary amendment in the application and consider the following remarks.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 15 of this paper.

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**Amendments to the Specification**

On page 1 of the specification, after the title and before the first heading, please insert the following:

**Cross Reference to Related Applications**

--  
The present application claims priority to Great Britain Patent Application No. 0326627.7, filed 14 November, 2003, which application is incorporated herein fully by this reference. --

A new abstract page on a separate sheet in accordance with 37 C.F.R. 1.72 is attached hereto.

Appendix: Abstract page

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This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1. (Original) A domestic heat and power system comprising a dchp unit, a dchp unit controller, a programmer module and an energy scheduler arranged to communicate with a domestic appliance, wherein:

the dchp unit controller, the programmer module and the energy scheduler are linked to allow communication therebetween;

the dchp unit is operable under command of the dchp unit controller to generate heat for heating a home and/or to provide hot water for the home and to generate electricity for supply to the home;

the energy scheduler is operable to receive power requirement information from the domestic appliance and to cause the domestic appliance to operate;

the programmer module is operable to receive data input by a consumer and to generate a corresponding heating and/or hot water schedule therefrom;

the dchp unit controller is operable to determine operating times of the dchp unit in accordance with the heating and/or hot water schedule provided by the programmer module and to provide the dchp unit operating times to the energy scheduler; and

the energy scheduler is operable to receive the dchp unit operating times and to determine operating times of the domestic appliance using the dchp unit operating times.

2. (Original) A domestic heat and power system according to claim 1, further comprising a connection to an electrical grid operable to supply electricity generated by the dchp unit to the grid.

3. (Currently amended) A domestic heat and power system according to claim 1 or claim 2, wherein the programmer module is operable to display information relating to the domestic heat and power system.

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4. (Currently amended) A domestic heat and power system according to claim 1 ~~any of claims 1 to 3~~, further comprising communication means operable to exchange information with one or more remote locations.
5. (Original) A heat and power system according to claim 4, wherein the communication means comprises a modem operable to communicate via a telephone network.
6. (Currently amended) A heat and power system according to claim 4 ~~or claim 5~~, wherein the programmer module is operable to receive information from service or product providers via the communication means.
7. (Currently amended) A heat and power system according to claim 4 ~~any of claims 4 to 6~~, wherein the programmer module is operable to send information about the heat and power system to a maintenance agent via the communication means.
8. (Currently amended) A domestic heat and power system according to claim 1 ~~any preceding claim~~, further comprising a first thermostat unit linked to allow communication to the programmer module.
9. (Original) A domestic heat and power system according to claim 8, wherein the first thermostat unit is operable to measure the temperature and to display the temperature so measured, and further comprises adjustment means operable to allow a consumer to set a desired temperature of the home.
10. (Original) A domestic heat and power system according to claim 9, further comprising one or more secondary thermostat units in communication with the first thermostat unit.

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data input by a consumer and to generate a corresponding heating and/or hot water schedule therefrom, and the dchp unit controller is operable to determine operating times of the dchp unit in accordance with the heating and /or hot water schedule provided by the programmer module and to provide the dchp unit operating times to the hub controller; and

at least one other home provided with a local energy scheduler arranged to communicate with the hub controller and a domestic appliance in that home and being operable to receive power requirement information from the domestic appliance and to pass the information to the hub controller, wherein the hub controller is operable to determine operating times of the domestic appliance using the dchp unit operating times and to pass the domestic appliance operating times to the local energy scheduler that, in turn, causes the domestic appliance to operate in accordance with that schedule.

16. (Currently amended) A domestic heat and power system according to claim 1 ~~any of claims 1 to 14~~, wherein the programmer module is operable to receive data input by a consumer corresponding to time bands having start and end times, a desired temperature for the home during that time band and/or confirmation that hot water is required during that time band, and the programmer module is operable to generate a corresponding heating and/or hot water schedule therefrom; and

the dchp unit controller is operable to determine operating times of the dchp unit in accordance with the heating and/or hot water schedule provided by the programmer module such that the temperature of the home reaches the desired temperature and/or hot water is available at the start time of each time band.

17. (Original) A domestic heat and power system comprising, a dchp unit, a dchp unit controller and a programmer module, wherein:

the dchp unit is operable under command of the dchp unit controller to generate heat for heating a home and/or providing hot water for the home and to generate electricity for supply to the home and/or to an electrical grid to which the home is connected;

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11. (Original) A domestic heat and power system according to claim 10, wherein only the first thermostat unit is operable to measure the temperature and all thermostat units are operable to display the temperature so measured and further comprise adjustment means to allow the consumer to set a temperature of the home.
12. (Currently amended) A domestic heat and power system according to claim 1 ~~any preceding claim~~, wherein the dchp unit controller has a first part operable to control an engine of the dchp unit and has a second part operable to control one or more heating elements of the dchp unit.
13. (Currently amended) A domestic heat and power system according to claim 1 ~~any preceding claim~~, further comprising a handheld device operable to receive data input by a consumer and to convey such information to the programmer module.
14. (Original) A domestic heat and power system according to claim 13, wherein the handheld device includes a thermostat.
15. (Original) A domestic heat and power system, serving a network of homes, comprising:
- a hub controller;
  - electricity transmission means connecting the network of homes;
  - communication means allowing communication between the network of homes and the hub controller;
  - at least one home provided with a dchp unit, a dchp unit controller and a programmer module wherein the dchp unit controller, the programmer module and the hub controller are linked to allow communication therebetween, the dchp unit is operable under command of the dchp unit controller to generate heat for heating that home and/or to provide hot water to that home and to generate electricity for use in that home and for supply into the network of homes via the electricity transmission means, the programmer module is operable to receive

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the programmer module is operable to receive data input by a consumer corresponding to time bands having start and end times, a desired temperature for the home during that time band and/or confirmation that hot water is required during that time band, and the programmer module is operable to generate a corresponding heating and/or hot water schedule therefrom; and

the dchp unit controller is operable to determine operating times of the dchp unit in accordance with the heating and/or hot water schedule provided by the programmer module such that the temperature of the home reaches the desired temperature and/or hot water is available at the start time of each time band.

18. (Currently amended) A domestic heat and power system according to claim 16 or ~~claim 17~~ the dchp unit further comprising a main burner and a supplementary burner, wherein operation of the main burner generates electricity and wherein the dchp unit controller determines the dchp unit operating times according to a rule that firing of the supplementary burner should be minimised.

19. (Original) A domestic heat and power system according to claim 18, wherein the dchp unit controller is operable to determine the dchp unit operating times such that there is a period where the main burner is fired alone prior to the start time of a time band for which an elevated desired temperature has been set.

20. (Original) A domestic heat and power system according to claim 19, wherein the dchp unit controller is operable to receive information indicative of the temperature of the home and to predict whether the home will reach the desired temperature in time for the start of the time band and, where the prediction is in the negative, is operable to cause the supplementary burner to fire thereby ensuring that the home does reach the desired temperature in time for the start of the time band.



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21. (Original) A domestic heat and power system according to claim 20, wherein the dchp unit controller is operable to record the time taken to reach the desired temperature of a time band for a plurality of previous days and to determine the length of the period during which the main burner alone is to be fired using these times.
22. (Original) A domestic heat and power system according to claim 21, wherein the dchp unit controller is operable to increase automatically the length of a subsequent period during which the main burner alone fired if the supplementary burner is fired to ensure the home reaches a desired temperature in advance of the start of the time band.
23. (Currently amended) A domestic heat and power system according to claim 18 ~~any of claims 18 to 22~~, wherein when both heating and hot water are required in advance of the start time of a time band, the dchp unit controller determines the dchp unit operating times according to a rule that the dchp unit operates for a first period to provide hot water immediately before a second period where the dchp unit operates to provide heating.
24. (Currently amended) A domestic heat and power system according to claim 18 ~~any of claims 18 to 23~~, wherein the dchp unit controller is operable to determine the dchp unit operating times such that the main burner remains firing between periods.
25. (Currently amended) A domestic heat and power system according to claim 18 ~~any of claims 18 to 24~~, wherein heating and/or hot water is maintained during a time band by the dchp unit under the command of the dchp unit controller, whereby the dchp controller is operable to determine operation of the dchp unit according to rule that the supplementary burner is switched between firing and idling in preference to switching the main burner between firing and idling.
26. (Currently amended) A domestic heat and power system according to claim 18 ~~any of claims 18 to 25~~, wherein the dchp controller is operable to control the firing rate of the

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supplementary burner and/or the main burner using a measure of the rate of change of the home temperature.

27. (Original) A domestic heat and power system according to claim 26, further comprising a thermistor-based thermometer operable to supply to the dchp unit controller the measure of the rate of change of the home temperature.

28. (Currently amended) A domestic heat and power system according to claim 27 ~~any of claims 25 to 27~~, wherein the temperature of the main burner head is monitored.

Claims 29 and 30 (cancelled).

31. (Currently amended) A domestic heat and power system according to claim 27 ~~any of claims 27 to claim 30~~, wherein the dchp unit controller is arranged to switch the mains burner to idle if a main burner head temperature above an upper limit is measured.

32. (Original) A domestic heat and power system according to claim 31, wherein the dchp unit controller is arranged to reduce the temperature of the main burner head without setting the engine burner to idle when a main burner head temperature above a lower limit but below the upper limit is measured.

33. (Currently amended) A domestic heat and power system according to claim 16 ~~any of claims 16 to 32~~, wherein the programmer module is operable to receive data input by a consumer corresponding to at least two sets of time bands having start and end times, a desired temperature for the home during that time band and/or confirmation that hot water is required during that time band, each time band spanning a twenty four hour period and the consumer indicating which set is to be used for each day of the week and wherein the dchp unit controller implements the appropriate set on each day.

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34. (Original) A domestic combined heat and power unit, for heating a home, comprising a main burner and a controller, wherein the controller is operable to control the firing rate of the main burner with reference to a signal received that is indicative of the rate of change of the home temperature.

35. (Original) A domestic combined heat and power unit according to claim 34, further comprising a supplementary burner and wherein the controller is operable to control the firing rate of the main burner or the supplementary burner with reference to a signal received that is indicative of the rate of change of the home temperature.

36. (Original) A domestic combined heat and power unit comprising a main burner and a controller, wherein in use the temperature of the main burner head is measured and the controller is operable to control the firing rate of the main burner to maintain a substantially constant temperature.

37. (Original) The domestic combined heat and power unit of claim 36, comprising a Stirling engine having a main burner and a supplementary burner, both of which are fired in use to provide heating and/or hot water.

Claim 38 (canceled)

39. (Currently amended) A domestic combined heat and power unit according to claim 36 ~~any of claims 36 to 38~~, wherein the controller is operable to maintain the main burner head temperature by varying the flow of combustible fuel through the main burner.

40. (Original) A method of energy scheduling in a home comprising a dchp unit, a dchp unit controller, a domestic appliance and an energy scheduler, the method comprising the steps of:

a consumer selecting hot water and/or heating requirements;

the dchp unit controller scheduling operation of the dchp unit to generate a hot water and/or heating schedule from the requirements selected;

the energy scheduler scheduling operation of the domestic appliance to coincide with operation of the dchp unit.

41. (Original) A method of providing heating and/or hot water to a home comprising a dchp unit, a dchp unit controller, a domestic appliance and an energy scheduler, the method comprising the steps of:

a consumer selecting time bands having start and end times, a desired temperature for the home during that time band and/or confirmation that hot water is required during that time band; and

the dchp unit controller scheduling operation of the dchp unit to generate a hot water and/or heating schedule in accordance with the heating and/or hot water requirements selected such that the temperature of the home reaches the selected temperature and/or hot water is available at the start time of each time band.

42. (New) A domestic heat and power system according to claim 25, wherein the temperature of the main burner head is monitored.

43. (New) A domestic heat and power system according to claim 42, wherein the dchp unit controller is arranged to switch the mains burner to idle if a main burner head temperature above an upper limit is measured.

44. (New) A domestic heat and power system according to claim 43, wherein the dchp unit controller is arranged to reduce the temperature of the main burner head without setting the engine burner to idle when a main burner head temperature above a lower limit but below the upper limit is measured.

45. (New) A domestic heat and power system according to claim 17, wherein the programmer module is operable to receive data input by a consumer corresponding to at least two sets of time bands having start and end times, a desired temperature for the home during that time band and/or confirmation that hot water is required during that time band, each time band spanning a twenty four hour period and the consumer indicating which set is to be used for each day of the week and wherein the dchp unit controller implements the appropriate set on each day.

46. (New) A domestic heat and power system according to claim 17 the dchp unit further comprising a main burner and a supplementary burner, wherein operation of the main burner generates electricity and wherein the dchp unit controller determines the dchp unit operating times according to a rule that firing of the supplementary burner should be minimised.

47. (New) A domestic heat and power system according to claim 46, wherein the dchp unit controller is operable to determine the dchp unit operating times such that there is a period where the main burner is fired alone prior to the start time of a time band for which an elevated desired temperature has been set.

48. (New) A domestic heat and power system according to claim 47, wherein the dchp unit controller is operable to receive information indicative of the temperature of the home and to predict whether the home will reach the desired temperature in time for the start of the time band and, where the prediction is in the negative, is operable to cause the supplementary burner to fire thereby ensuring that the home does reach the desired temperature in time for the start of the time band.

49. (New) A domestic heat and power system according to claim 48, wherein the dchp unit controller is operable to record the time taken to reach the desired temperature of a time band for a plurality of previous days and to determine the length of the period during which the main burner alone is to be fired using these times.

50. (New) A domestic heat and power system according to claim 49, wherein the dchp unit controller is operable to increase automatically the length of a subsequent period during which the main burner alone fired if the supplementary burner is fired to ensure the home reaches a desired temperature in advance of the start of the time band.

51. (New) A domestic heat and power system according to claim 46, wherein when both heating and hot water are required in advance of the start time of a time band, the dchp unit controller determines the dchp unit operating times according to a rule that the dchp unit operates for a first period to provide hot water immediately before a second period where the dchp unit operates to provide heating.

52. (New) A domestic heat and power system according to claim 46, wherein the dchp unit controller is operable to determine the dchp unit operating times such that the main burner remains firing between periods.

53. (New) A domestic heat and power system according to claim 46, wherein heating and/or hot water is maintained during a time band by the dchp unit under the command of the dchp unit controller, whereby the dchp controller is operable to determine operation of the dchp unit according to rule that the supplementary burner is switched between firing and idling in preference to switching the main burner between firing and idling.

54. (New) A domestic heat and power system according to claim 53, wherein the temperature of the main burner head is monitored.

55. (New) A domestic heat and power system according to claim 54, wherein the dchp unit controller is arranged to switch the mains burner to idle if a main burner head temperature above an upper limit is measured.

56. (New) A domestic heat and power system according to claim 55, wherein the dchp unit controller is arranged to reduce the temperature of the main burner head without setting the engine burner to idle when a main burner head temperature above a lower limit but below the upper limit is measured.

57. (New) A domestic heat and power system according to claim 46, wherein the dchp controller is operable to control the firing rate of the supplementary burner and/or the main burner using a measure of the rate of change of the home temperature.

58. (New) A domestic heat and power system according to claim 57, further comprising a thermistor-based thermometer operable to supply to the dchp unit controller the measure of the rate of change of the home temperature.

59. (New) A domestic heat and power system according to claim 58, wherein the temperature of the main burner head is monitored.

60. (New) A domestic heat and power system according to claim 58, wherein the dchp unit controller is arranged to switch the mains burner to idle if a main burner head temperature above an upper limit is measured.

61. (New) A domestic heat and power system according to claim 60, wherein the dchp unit controller is arranged to reduce the temperature of the main burner head without setting the engine burner to idle when a main burner head temperature above a lower limit but below the upper limit is measured.

Remarks

The specification is amended herein to update the priority claim for this application. It is believed that no new matter has been added by this amendment, and Applicants respectfully request entry of same into the present application.

Claims 1 - 41 are pending. Claims 3-4, 6-8, 12-13, 16, 18, 23-26, 28, 31 and 33 have been amended. Claims 28, 29 and 38 have been canceled. New claims 42 to 61 have been added. It is believed that no new matter has been added by these amendments, and Applicants respectfully request entry of same into the present application.

Enclosed is Credit Card Payment Form PTO-2038 authorizing payment in the amount of \$3,730.00 for the filing fee of the application with which this Preliminary Amendment is being filed. This amount is believed to be correct. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.



Sumner C. Rosenberg  
Registration No. 28,753

NEEDLE & ROSENBERG, P.C.  
Customer Number 23859  
(678) 420-9300  
(678) 420-9301 (fax)



**Abstract**

This invention relates to domestic heat and power systems that allow efficient methods of operating a domestic combined heat and power (dchp) unit and to energy-efficient methods of scheduling domestic appliance operation within a household having a dchp unit. Dchp units provide heating and hot water for the home and also generate electricity for use in the home. A domestic heat and power system is provided that comprises a dchp unit, a dchp unit controller, a programmer module and an energy scheduler linked to allow communication therebetween, wherein the programmer module receives data input and generates a heating and/or hot water schedule therefrom, the dchp unit controller determines operating times of the dchp unit in accordance with the schedule and provides the operating times to the energy scheduler that then operates the domestic appliance during operating times.

IAP7 Rec PCT/PTO 12 MAY 2006

Form PTO-1390		EXPRESS MAIL LABEL NO.: EL997679000US	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER: 02157.0029U1	
INTERNATIONAL APPLICATION NO. PCT/GB2004/004835		U.S. APPLICATION NO. 11/357,123	
INTERNATIONAL FILING DATE 15 November 2004		PRIORITY DATE CLAIMED 14 November 2003	
TITLE OF INVENTION: <b>DOMESTIC HEAT AND POWER SYSTEM</b>			
APPLICANT(S) FOR DO/EO/US: Nigel Graham MOORE; Heather ALLDERIDGE; Frank FERDINANDI; Christopher John SPENCELEY; Adrian Robin RICHARDSON; Wayne Kenneth ALDRIDGE; David Anthony CLARK; and Alan William MCCARTHY-WYPER.			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.			
2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.			
3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.			
4. <input type="checkbox"/> The US has been elected (Article 31).			
5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))			
a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).			
b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.			
c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).			
6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))			
a. <input type="checkbox"/> is attached hereto.			
b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).			
7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))			
a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).			
b. <input type="checkbox"/> have been communicated by the International Bureau.			
c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.			
d. <input checked="" type="checkbox"/> have not been made and will not be made.			
8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).			
9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).			
10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 38 (35 U.S.C. 371(c)(5)).			
Items 11 to 20 below concern document(s) or information included:			
11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.			
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.			
13. <input checked="" type="checkbox"/> A preliminary amendment.			
14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.78.			
15. <input type="checkbox"/> A substitute specification.			
16. <input type="checkbox"/> A power of attorney and/or change of address letter.			
17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825. The contents of the paper copy and the computer-readable form of the Sequence Listing submitted herewith are the same and include no new matter, as required by 37 C.F.R. 1.821(f).			
18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).			
19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).			
20. Other items or information:			

IAP20 Rec'd PCT/PTO 12 MAY 2006

U.S. APPLICATION NO. (Required under 37 CFR 1.5)		INTERNATIONAL APPLICATION NO. PCT/GB2004/004835		ATTORNEY DOCKET NUMBER 02157.0029U1	
				CALCULATIONS	PTO USE ONLY
The following fees have been submitted				\$ 300.00	
21. <input checked="" type="checkbox"/> Basic national fee				\$ 300.00	
22. <input checked="" type="checkbox"/> Examination fee				\$ 200.00	
If written opinion prepared by ISA/US or the IPER prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)(4) \$ 0.00					
All other situations \$200.00					
23. <input checked="" type="checkbox"/> Search Fee				\$ 400.00	
If written opinion prepared by ISA/US or the IPER prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)(4) \$ 0.00					
If Search fee (37 CFR 1.445(a)(2)) in International Application to USPTO as ISA \$100.00					
ISR prepared by an ISA other than the US and provided to USPTO \$400.00					
All other situations \$500.00					
TOTAL OF 21, 22 AND 23 =				\$ 800.00	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	No. of each additional 50 or fraction thereof (round up to a whole number)	RATE		
- 100	150 =		X \$250	\$ 0.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 130.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	(58) - 20 =	38	X \$50.00	\$1900.00	
Independent claims	(7) - 3 =	4	X \$200.00	\$ 800.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 0.00	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2				\$ 0.00	
SUBTOTAL =				\$3730.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 months <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$ 0.00	
TOTAL NATIONAL FEE =				\$3730.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) \$40.00 per property				\$ 0.00	
TOTAL FEES ENCLOSED =				\$3730.00	
				Amount to be refunded	\$
				charged	\$
<p>a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. 14-0629 in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees, which may be required, or credit any overpayment to Deposit Account No. 14-0629. A duplicate copy of this sheet is enclosed.</p> <p>d. <input checked="" type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <p>e. <input checked="" type="checkbox"/> Pursuant to 37 C.F.R. §1.136(a)(3), the Commissioner is hereby requested and authorized to treat any concurrent or future reply in the above-identified application, requiring a petition for an extension of time for its timely submission, as incorporating a petition for extension of time for the appropriate length of time.</p>					
<p>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.</p>					
<p>SEND ALL TO THE ADDRESS ASSOCIATED WITH:</p> <p>Customer No. 23859</p>					
<p>SIGNATURE _____</p> <p>Sumner C. Rosenberg</p> <p>NAME</p> <p>28,753</p> <p>REGISTRATION NUMBER</p>					



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**Deposit Account Statement**

Requested Statement Month: December 2006  
 Deposit Account Number: 140629  
 Name: NEEDLE & ROSENBERG, P.C.  
 Attention: JUDY LEE WHITE  
 Address: 999 PEACHTREE STREET  
 City: ATLANTA  
 State: GA  
 Zip: 30309-3915  
 Country: UNITED STATES

DATE	SEQ	POSTING REF TXT	ATTORNEY DOCKET NBR	FEE CODE	AMT	BAL
12/01	131	10232499	2002-0052	1253	-\$1,020.00	\$6,056.00
12/04	71	E-REPLENISHMENT		9203	-\$5,500.00	\$11,556.00
12/05	7	10416979	14014.0340U2	1251	\$120.00	\$11,436.00
12/26	4	10579123	EL997679000US	1615	\$100.00	\$11,336.00
12/27	16	PCT/US06/61002	21002.0010P1	8007	\$20.00	\$11,316.00
12/28	2	10416979	14014.0340U2	1201	\$600.00	\$10,716.00
12/29	4	10445074	03234.0018U2	1201	\$200.00	\$10,516.00
		START BALANCE	SUM OF CHARGES	SUM OF REPLENISH	END BALANCE	
		\$5,036.00	\$1,040.00	\$6,520.00	\$10,516.00	

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